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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,166	03/25/2004	Jari Vallstrom	KOLS.100PA	6817

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EXAMINER	
AJAYI, JOEL	

ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/809,166	VALLSTROM ET AL.	
	Examiner	Art Unit	
	Joel Ajayi	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 November 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Cho (U.S. Patent Application Number: 2003/0045242)** in view of **Hamalainen et al. (U.S. Patent Application Number: 2002/0061744).**

Consider **claim 1**; Cho discloses a method comprising: establishing a first Bluetooth connection with a first unit; establishing a second Bluetooth connection to a unit other than the first unit while maintaining the first Bluetooth connection with the first unit; receiving a control command from the first unit for adjusting activity of the second Bluetooth connection when another Bluetooth connection needs to be established by the first unit, the other Bluetooth connection operating on the same frequency band as the second Bluetooth connection (paragraph 7); and adjusting the second Bluetooth connection activity based on the control command received from the first unit (the master device, which controls the network, adjusts the connection whenever a slave device is added via a control command) (paragraph 6; paragraph 13, lines 3-8).

Cho fails to disclose establishing a wireless low power radio frequency (LPRF) connection.

In the same field of endeavor Hamalainen discloses establishing a wireless low power radio frequency (LPRF) connection (paragraph 12, lines 1-12).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Hamalainen into the method of Cho in order to control wireless low power radio frequency networks.

Consider **claim 16**; Cho discloses a radio terminal equipment arrangement comprising: a cellular core unit and at least one peripheral unit, the cellular core unit (master device) being configured to communicate with a peripheral unit (slave device) using a Bluetooth connection, a peripheral unit being configured to establish an outside Bluetooth connection to a unit other than the core unit, wherein the core unit is further configured to give a control command for adjusting the outside Bluetooth connection activity of the peripheral unit when another Bluetooth

connection needs to be established by the core unit, the other Bluetooth connection operating on the same frequency band as the outside Bluetooth connection of the peripheral unit (paragraph 7); and the peripheral unit is configured to adjust the outside Bluetooth connection activity based on the control command received from the core unit (the master device, which controls the network, adjusts the connection whenever a slave device is added via a control command) (paragraph 6; paragraph 13, lines 3-8).

Cho fails to disclose establishing a wireless low power radio frequency (LPRF) connection.

In the same field of endeavor Hamalainen discloses establishing a wireless low power radio frequency (LPRF) connection (paragraph 12, lines 1-12).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Hamalainen into the method of Cho in order to control wireless low power radio frequency networks.

Consider **claim 31**; Cho discloses establishing a Bluetooth connection between a first and a second device (detection and synchronization to the received frequencies, by slave devices); giving a control command by the first device for adjusting activity of a second LPRF connection of the second device when another Bluetooth connection needs to be established by the first device, the other Bluetooth connection operating on the same frequency band as the second Bluetooth connection of the second device (paragraph 7); and adjusting the second LPRF connection activity of the second device based on the control command received from the first device (the master device, which controls the network, adjusts the connection whenever a slave device is added via a control command) (paragraph 6; paragraph 13, lines 3-8).

Cho fails to disclose establishing a wireless low power radio frequency (LPRF) connection.

In the same field of endeavor Hamalainen discloses establishing a wireless low power radio frequency (LPRF) connection (paragraph 12, lines 1-12).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Hamalainen into the method of Cho in order to control wireless low power radio frequency networks.

Consider **claim 36**; Cho discloses a transceiver configured to communicate with a peripheral device using a Bluetooth connection (paragraph 26), and a controller configured to provide a control command for adjusting outside Bluetooth connection activity of the peripheral device when a new Bluetooth connection needs to be established by the cellular core device so that any outside Bluetooth connection activity of the peripheral device operating on the same frequency band as the new LPRF connection is adjusted accordingly (the master device, which controls the network, adjusts the connection whenever a slave device is added via a control command) (paragraph 6; paragraph 13, lines 3-8).

Cho fails to disclose establishing a wireless low power radio frequency (LPRF) connection.

In the same field of endeavor Hamalainen discloses establishing a wireless low power radio frequency (LPRF) connection (paragraph 12, lines 1-12).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Hamalainen into the method of Cho in order to control wireless low power radio frequency networks.

Consider **claim 37**; Cho discloses a transceiver configured to establish a Bluetooth connection with a first unit and a second Bluetooth connection with another unit other than the first unit while maintaining the first Bluetooth connection with the first unit; and a controller configured to adjust the second Bluetooth connection activity based on a control command received from the first unit via the transceiver (the master device, which controls the network, adjusts the connection whenever a slave device is added via a control command) (paragraph 6; paragraph 13, lines 3-8).

Cho fails to disclose establishing a wireless low power radio frequency (LPRF) connection.

In the same field of endeavor Hamalainen discloses establishing a wireless low power radio frequency (LPRF) connection (paragraph 12, lines 1-12).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Hamalainen into the method of Cho in order to control wireless low power radio frequency networks.

Consider **claims 2, 32;** Cho discloses establishing the other LPRF connection (new connection) by the first unit (master device) after the second LPRF connection activity has been adjusted (paragraphs 6 and 7).

Consider **claim 3;** Cho discloses that before establishing the second LPRF connection (in order to construct a new connection), the method further comprising informing the first unit about the second LPRF connection being established (paragraphs 6 and 7).

Consider **claim 4;** Cho discloses periodically pausing the established second LPRF connection activity (hold mode) and communicating with the first unit during the pause in order

to resolve whether the first unit has control commands for adjusting the second LPRF connection activity (park mode) (paragraph 9).

Consider **claim 5;** Cho discloses using Bluetooth sleep mode techniques (hold, sniff, park) in order to resolve whether the first unit has control commands for adjusting the second LPRF connection activity (paragraph 9).

Consider **claim 6;** Cho discloses that the other LPRF connection being established is between the core unit (master device) and a peripheral unit (slave device) (paragraph 6).

Consider **claim 7;** Hamalainen discloses that the other LPRF connection being established between the core unit and the same peripheral unit that establishes the outside LPRF connection (printer) (paragraph 8, lines 5-9; paragraph 23, lines 8-25).

Consider **claim 8;** Hamalainen discloses that the other LPRF connection being established between the first unit and a unit other than a peripheral unit of the radio system (external telecommunication network) (paragraph 8, lines 5-9).

Consider **claims 9, 33;** Cho discloses the step of adjusting the second LPRF connection comprises decreasing the power of the second LPRF connection (power saving modes) (paragraph 9).

Consider **claims 10, 34;** Cho discloses the step of adjusting the second LPRF connection comprises restricting use of the second LPRF connection (the devise are allowed to transmit and receive data only for a predetermined period of time) (paragraph 9, lines 7-9).

Consider **claims 11, 35;** Cho discloses that the step of adjusting the second LPRF connection comprising pausing the outside LPRF connection activity (paragraph 9).

Consider **claim 12**; Hamalainen discloses that the second LPRF connection or the other LPRF connection is a WLAN connection (paragraph 6 and 7).

Consider **claim 13**; Hamalainen discloses that the second LPRF connection or the other LPRF connection is a Bluetooth connection (paragraph 6 and 7).

Consider **claim 14**; Hamalainen discloses that the second LPRF connection established is a WLAN connection and the other LPRF connection established by the first unit is a Bluetooth connection (paragraph 6 and 7).

Consider **claims 15;** Cho discloses informing the first unit when the second LPRF connection ends (the master/core unit communicates and negotiates with the slave devices, this is done for a predetermined time period, therefore when the time period ends the master/core unit is informed) (paragraph 11).

Consider **claim 17;** Cho discloses establishing the other LPRF connection (new connection) by the core unit (master device) after the outside LPRF connection activity of the peripheral unit (slave device) has been adjusted (paragraphs 6 and 7).

Consider **claim 18;** Cho discloses that before establishing the outside LPRF connection (in order to construct a new connection), the method further comprising informing the core unit about the outside LPRF connection being established (paragraphs 6 and 7).

Consider **claim 19 ;** Cho discloses periodically pausing the established outside LPRF connection activity (hold mode) and communicating with the core unit during the pause in order to resolve whether the core unit has control commands for the peripheral unit for adjusting the outside LPRF connection activity (park mode) (paragraph 9).

Consider **claim 20;** Cho discloses using a Bluetooth sleep mode techniques (hold, sniff, park) in order to resolve whether the core unit has control commands for adjusting the outside LPRF connection activity (paragraph 9).

Consider **claim 21;** Hamalainen discloses that the other LPRF connection being established between the core unit (access point) and a peripheral unit (portable computer) (paragraph 23, lines 8-25).

Consider **claim 22;** Hamalainen discloses that the other LPRF connection being established between the core unit and the same peripheral unit that establishes the outside LPRF connection (printer) (paragraph 8, lines 5-9; paragraph 23, lines 8-25).

Consider **claim 23;** Hamalainen discloses that the other LPRF connection being established between the core unit and a unit other than a peripheral unit of the radio system (external telecommunication network) (paragraph 8, lines 5-9).

Consider **claim 24;** Cho discloses the step of adjusting the outside LPRF connection comprising decreasing the power of the outside LPRF connection (power saving modes) (paragraph 9).

Consider **claim 25;** Cho discloses the step of adjusting the outside LPRF connection comprising restricting use of the outside LPRF connection (the devise are allowed to transmit and receive data only for a predetermined period of time) (paragraph 9, lines 7-9).

Consider **claim 26;** Cho discloses that the peripheral unit is configured to adjust the outside LPRF connection by pausing the outside LPRF connection activity (park mode) (paragraph 9).

Consider **claim 27**; Hamalainen discloses that the outside LPRF connection or the other LPRF connection is a WLAN connection (paragraph 6 and 7).

Consider **claim 28**; Hamalainen discloses that the outside LPRF connection or the other LPRF connection is a Bluetooth connection (paragraph 6 and 7).

Consider **claim 29**; Hamalainen discloses that the outside LPRF connection established by the peripheral unit is a WLAN connection and the other LPRF connection established by the core unit is a Bluetooth connection (paragraph 6 and 7).

Consider **claim 30;** Cho discloses informing the core unit when the outside LPRF connection ends (the master/core unit communicates and negotiates with the slave devices, this is done for a predetermined time period, therefore when the time period ends the master/core unit is informed) (paragraph 11).

Conclusion

Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Joel Ajayi whose telephone number is (571) 270-1091. The Examiner can normally be reached on Monday-Friday from 7:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Joel Ajayi

CHARLES N. APPIAH
SUPERVISORY PATENT EXAMINER